





Strategic balance- sheet management The quest for performance

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The new regulatory landscape

Five years ago, the collapse of investment bank giant Lehman Brothers triggered a series of cascading effects in the financial markets, leading to a crisis that spread outside the banking ecosphere and seriously damaging most western economies and governments. Rule-makers around the globe have worked since then to design new (or strengthened) regulations to prevent (or limit) the occurrence of similar scenarios in the future. In Europe, this has led to a series of Directives and Regulations (EMIR¹, CRD IV², SSM³, etc.) being issued by the European Commission.

This set of new rules has a deep impact on the banks' overall strategy and operating models and should be read together in order to grasp the full extent of their implications. In this article, we will focus on the new Capital Requirements Directive (CRR/CRD IV) that came into force on 1 January 2014.

This new regulatory environment has been designed to mitigate the excesses observed and address weaknesses in prudential regulation, covering the following aspects:

- Increase the quality and level of capital to reduce pro-cyclicality
- Reduce systemic risk and control revenue distribution to shareholders⁴
- Set-up liquidity standards aiming to enhance both the short-term and long-term liquidity profile of financial institutions
- Limit the banks' capacity to leverage their activities

The introduction of the CRD IV is going to introduce additional constraints on financial institutions that will lead to a modification of their balance sheet structures, inducing (all other things being equal) a decrease of the financial institutions' risk profile and, consequently, pressuring those institutions' financial performance.

The objective of this article is to illustrate the potential impacts of CRD IV requirements on the industry as a whole and to present our view on the related challenges for senior management and support functions (CFO, CRO) when managing their company's performance.



1 European Market Infrastructure Regulation

2 Capital Requirements Directive

3 Single Supervisory Mechanism

4 The minimum requirement remains at 8% but the CRD IV introduces capital buffers, but focuses on the quality of own funds through strong emphasis on Core Equity Tier 1

Capital management and its impact on Return On Equity (ROE)

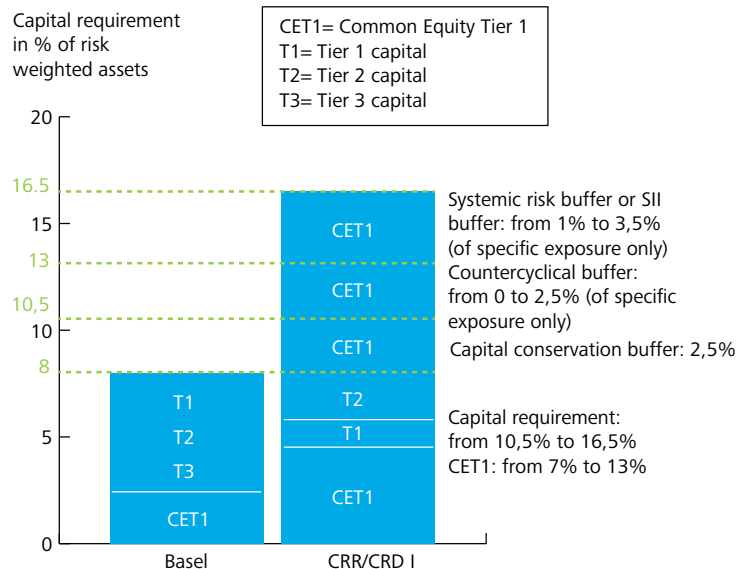
In order to conduct their activities, financial institutions are required to hold a level of own funds that should be large enough to absorb any unexpected losses arising from their activities. In order to estimate the level of own funds that financial institutions should have, banks are required to estimate the level of risks to which they are exposed through their market and credit activities as well as through their operations. To do so, banks either apply a standardised method provided by supervisors or use an internal rating approach also approved by supervisors.

Until now, the solvency ratio of financial institutions, defined as the ratio of the amount of eligible available own funds to the level of risks the bank is exposed to (the so-called Risk Weighted Assets, or RWA⁵), had to be above 8%, with the possibility of having subordinated debt (and similar capital instruments) representing up to 50% of these own funds.

This will gradually change and, when the CRD IV will be fully applicable as of 2019⁶, the quality and the level of own funds held by financial institutions will be larger, driven by the following requirements:

- The portion of Tier 1 capital (made up of the most solid capital instruments such as subscribed capital and retained earnings, for instance) in the overall minimum amount of capital shall increase by 50%, from 4% of RWA to 6% of RWA
- On top of the minimum level of own funds (8% of RWA), financial institutions shall hold additional capital buffers, solely made up of tier 1 core equity, with a cumulative buffer size ranging from 2.5% of RWA up to 8.5% of RWA⁷

Figure 1



Rule-makers around the globe have worked since then to design new (or strengthened) regulations to prevent (or limit) the occurrence of similar scenarios in the future

⁵ The level of Risk Weighted Assets (RWA) and the level of capital requirements are risk measured expressed on different scales. Capital requirements= 8%*RWA

⁶ Between 2014 and 2019, transitional provisions will phase in the CRD IV requirements introduced by the EU regulation No. 575/2013, i.e. the regulation part of the CRD IV (CRR)

⁷ Depending on the economic cycle and the size of the financial institution

The consequence of these new requirements for financial institutions will be a reduction in the ROE through an increase in equity accompanied by a decrease in the return justified by growth in financing costs together with an increase in taxable revenues.

The increase in financing costs is due to the change in banks' balance sheets as a result of the new regulations. More specifically, financial institutions will have to increase their level of Tier 1 capital for the same business mix. This means that the same amount of assets on the balance sheet will be matched by a smaller amount of debt and a larger amount of equity. As debt is usually a less expensive funding source than equity, this new funding structure should lead to an increase in banks' overall financing costs, despite a probable reduction in the cost of equity.

Why such an increase? According to the Capital Asset Pricing Model, the cost of equity paid by an entity is the sum of the risk free rate and a risk premium multiplied by the beta (β) of the entity.

$$\text{cost of equity} = \text{risk free rate} + \beta \times \text{risk premium}$$

Depending on the funding structure of the entity, the value of the β will fluctuate according to the following relationship:

$$\text{levered } \beta = \text{unlevered } \beta \times (1 + (1 - \text{tax rate}) \times D/E)$$

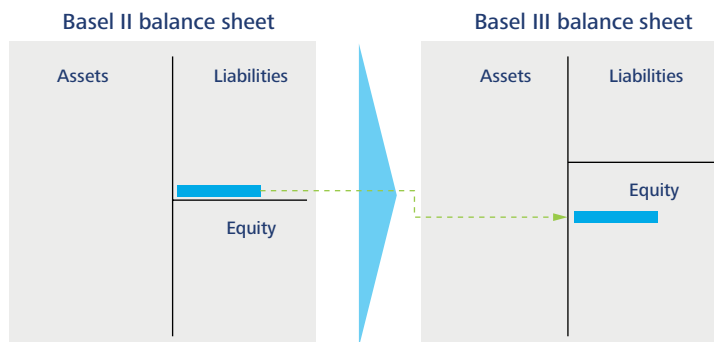
As the debt-to-equity ratio (D/E) will be reduced, the levered β of banks will be lower, leading to a decrease in the cost of equity.

However, the reduction in the cost of equity should be more than compensated for by the larger share of equity in the bank's capital structure as the portion of core equity more than doubles.

The illustration below summarises the impact of stricter capital requirements on a bank's balance sheet.

Taxable revenues will also increase under the new regulations. As more capital will have to be set aside for a given portfolio of assets, the portion of debt on the balance sheet will be reduced. As a result, interest expenses will be lower, resulting in a higher taxable income.

Figure 2



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Liquidity management and its impact on treasury and ALM

The recent liquidity crisis has illustrated significant flaws in some business models and the weaknesses of several financial innovations. The financial crisis indeed revealed that some banks had become increasingly reliant on wholesale funding and short-term liquidity lines. The weak equilibrium reached in the financial market in 2007 turned out to be extremely vulnerable and ineffective when things went nasty, which translated into the transfer of funding illiquidity to market illiquidity, whereby market participants were forced to sell securities at fire-sale prices, operations highlighting the deterioration of asset prices and bank solvency, creating a vicious circle (procyclicality).

In order to overcome the weaknesses that led to these adverse events, the CRD IV measures introduce a whole new set of regulatory liquidity ratios to measure and improve both the structural health (Net Stable Funding Ratio—NSFR) and short-term liquidity risk profile (Liquidity Coverage Ratio—LCR) of banks, forcing the sector toward a more prudent balance-sheet profile. The impact of these liquidity standards can be quite diverse depending on a financial institution’s business mix. Nevertheless, these new standards will lead to a decrease in financial institutions’ margins through a reduction in the maturity mismatch combined with a reduction in the return on assets.

With the LCR, the industry will be forced to transfer a part of its core assets into a portfolio made of high-quality liquid assets that will provide lower remuneration compared to its core activities. The impact of the LCR on the bank’s performance will depend on the business mix. For example, retail and custodian banks differ widely in their sources of short-term cash inflows (e.g. loans to non-financial customers vs. cash replacement to financial customers) and outflows (e.g. retail vs. corporate deposits) and, as a result, the amount of liquid assets required due to the LCR will also differ.

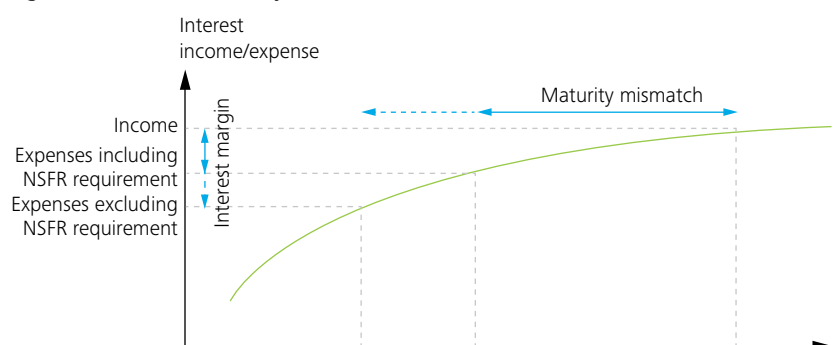
At the same time, the NSFR requires a minimum amount of funding that is expected to be stable over a one-year horizon to cover the liquidity required to finance assets and off-balance sheet exposures. As the NSFR promotes more medium and long-term funding, this will lead to longer-term structural funding of balance sheet items which will reduce the maturity gap between the bank’s interest income and expenses. The overall result is a decrease in interest margins, revenues and return on assets.

The figure below highlights the decreasing maturity gap as a result of the NSFR resulting in lower interest margins.

Figure 3



Figure 4: Interest vs. maturity



The leverage ratio can be seen as a complementary tool to reduce the influence of complex modelling assumptions and calibration procedures on a bank's capital structure

Leverage and its impact on performance

Excessive leverage in (some) banks is widely recognised as one of the factors having contributed to the global financial crisis. Over the past years, financial innovation has fundamentally changed the structure of the financial system. For instance, banks have extensively used credit risk transfer instruments such as structured credit products and have funded a growing amount of long-term assets with short-term liabilities in wholesale markets through the use of off-balance sheet vehicles, exposing themselves to credit and liquidity risk by providing facilities to these vehicles.

In parallel with the structural changes observed in the financial system, risk-based prudential approaches such as the Basel II framework are not designed to fully capture those trends, as non-risky (or risk-mitigated) assets could potentially be piled up definitively in banks' balance sheets such that small deviations from expected risk crystallisation could lead to serious trouble. Inadequate assumptions can lead to a false sense of security and the great dispersion of internal models across the industry emphasises the importance of model risk. A striking illustration of the potential extent of model risk is given by the current regulatory consistency assessment programme conducted by the EU authorities where the preliminary results indicate notable dispersion in the estimated risk parameters assigned to similar exposures⁸.

One objective of adding the leverage ratio to the prudential toolkit to complement minimum capital adequacy requirements is therefore to allow an assessment of a bank's capital adequacy that is fully independent of any complex modelling assumptions and calibration procedures. In other words, the leverage ratio can be seen as a complementary tool to reduce the influence of complex modelling assumptions and calibration procedures on a bank's capital structure.

The introduction of the leverage ratio under CRD IV is not accompanied by a specific limit yet. Nevertheless, Basel III advises the setting up of a 3% level, requiring banks to hold a minimum of 3% of Tier 1 capital as a percentage of total assets (and some off-balance sheet items). In other words, any increase in asset value will have to be matched by a corresponding increase in Tier 1 capital (all other things being equal).

To illustrate this, let's consider the mortgage portfolio of a retail bank using the standardised approach to assess its risk. In such a situation, the bank will report a level of Tier 1 capital that will be large enough to strictly comply with the leverage ratio requirement. Under the standardised approach, the mortgage loan portfolio will receive a risk weighting of 35% that will lead to a Tier 1 capital requirement of 35% x 8.5%⁹ mortgage loan portfolio exposure. If we estimate the bank has a Tier 1 capital level slightly above the requirement, the leverage ratio will be close to the 3% limit.

⁸ See "BCBS256 - Regulatory Consistency Assessment Programme (RCAP) - Analysis of risk-weighted assets for credit risk in the banking book"

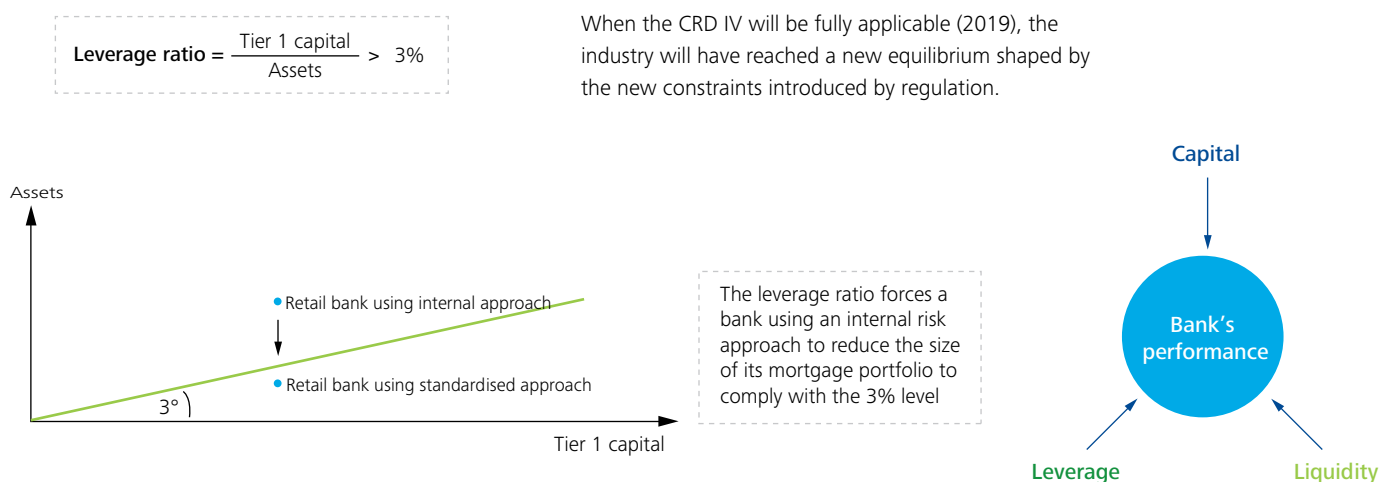
⁹ CRD IV requires banks to hold a level of 8.5% of Tier 1 capital when considering the impact of the capital conservation buffer, i.e. the counter-cyclical buffer and the systemic buffer are not considered



If the same bank applies an internal model for the assessment of its risk, we can assume that the capital charge for the mortgage portfolio will be lower than the one obtained under the standardised approach. In that case, the bank will be limited by the application of the leverage ratio and will be forced to reduce the size of its mortgage portfolio in order to comply with the requirement. Therefore, it will reduce the performance of the bank impacted by the leverage ratio through an increase of the cost/income ratio¹⁰.

The graph below illustrates the relationship between Tier 1 capital and assets, showing the impact of the leverage ratio, i.e. banks will have to report a level of assets below the green line.

Figure 5



¹⁰ In that case, banks will be forced to reduce their asset size, leading to a reduction in income for the same level of cost.

During the transitional phase in which the CDR IV will be progressively incorporated into the economy, banks will have to adjust their business model and their balance-sheet structure in order to maintain their risk/return profile at a level accepted by the financial markets.

The scope of work will be extensive and complex but we believe the industry should primarily focus on the development of an optimal funding structure, a review of their asset allocations, the enhancement of their operations and the setting up of strategic balance-sheet management.

Funding structure

In order to cope with the new liquidity standards, banks will have to find the optimal funding structures that will support their commercial activities at an acceptable cost. Depending on their business model, banks need to respond in a structured way, building a funding structure across instruments, investors and regions.

Given the ambitions of regulators to reduce the importance of the interbank funding channel in order to increase the resilience of the industry in the event of shocks, the industry will have to diversify its funding base through an improvement in their deposit-funding strategies. Amongst others, this development will go through the setting up of innovative funding sources and structures, such as the issuance of new secured-liquid instruments targeting institutional investors, the retail sector, etc.

Asset allocations

With the increase in their cost base, banks will have to increase their Internal Rate of Return (IRR) in order to maintain a profitability level that will be accepted by financial markets and shareholders. This could force banks to tighten their standards for the acceptance of new deals¹⁰, potentially leading to shrinkage of their portfolio that could even force banks out of some businesses. In order to compensate for these losses of market shares, banks will have to review their business model and develop new commercial opportunities in order to ensure proper asset allocations. Nevertheless, the decision to adapt the business model to balance competitive needs will ensure that a bank is taking a decision that is economically viable in the long term.

Enhance operations

In order to offset the probable increase in operating costs (overheads¹² and financial expenses), banks will need to enhance their operations through the development of a solid risk governance framework build upon a central data system and an efficient IT infrastructure. Such an approach

will help management access the right information, helping them to improve their reporting capabilities on one hand and overall to monitor business activity on a day-to-day basis. For example, management of collateral at a central level will help the bank to reduce its financing cost through optimal use of those assets.

Strategic balance-sheet optimisation

The increase in regulatory requirements leading to growth in financial costs will force banks' management to address some strategic questions about the maximisation of their returns given their structural balance-sheet constraints. To address these questions, banks will have to improve their resource allocations within these new limits. In order to achieve a portfolio management approach to which banks could apply a Capital Asset Pricing Model, banks need to improve the integration of risks, capital, funding and return aspects. An integrated view of those aspects will help banks to develop a sound transfer-pricing model, helping management with asset allocation exercises and the allocation of resources per commercial segment.

Conclusion

The industry challenges resulting from the introduction of CRD IV will increase the pressure on the bank's management to address these new constraints adequately. The CRD IV will impact not only the accounting and risk functions, but the whole banking organisation from commercial activities to treasury departments. Banks' liquidity and funding management will tend to be an increasingly strategic instrument that will give competitive advantage to institutions that implement proper governance and decision processes.

Together with the ALM functions, the risk management department will need to ensure that emerging trends and regulatory changes are analysed in detail in order to generate appropriate insights for the risk oversight duties of governing bodies (senior management and board of directors) when setting business strategies. To do so, those departments might need to improve the integration and/or the sophistication of their processes (fund transfer pricing, automation of reports, development of central data management, etc.) in order to better capture the various drivers impacting the bank's performance, as well as their interconnection.

Understanding and actively monitoring the various indicators that will track these drivers will no longer be an option when entering this new risk and capital management era.

¹¹ To achieve their new level of return, bank should transfer their costs to clients. All other things being equal, it should lead to a decrease in their volume of activity.

¹² Cost of implementation various pieces of regulation (and the associated reporting burden) are expected to be significant in the coming years

